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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/504,876	02/16/2000	Paul Hinker	06502-0210-00000	5556

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EXAMINER

TRAN, DENISE

ART UNIT

PAPER NUMBER

2186

DATE MAILED: 03/29/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/504,876

Applicant(s)

HINKER ET AL.

Examiner

Denise Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-12,14-19,21 and 24-32 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4,7-12,14-19,21 and 24 is/are allowed.
- 6) ☒ Claim(s) 25-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 February 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/23/04 has been entered.
2. Claim 6 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 11.
3. Claims 1-4, 7-12, 14-19, 21, 24 and new added claims 25-32 are presented for examination. Claims 5, 13, 20, and 22-23 have been canceled.
4. Claims 18-19, and 21 objected to because of the following informalities: "the computer-readable medium" should be --the computer-readable medium including instructions for performing the method--. Appropriate correction is required.
5. Claims 1-4, 7-12, 14-19, 21 and 24 are allowable over the prior art of record.

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 25-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Sturges, U.S. Patent No. 5,930,827.

As per claim 29, Sturges teaches a method in a data processing system for allocating memory, the method comprising:

receiving a memory request for a reference to a memory block (e.g., col. 6, lines 60-65); returning the reference to the memory block to satisfy the memory request (e.g., col. 6, line 60-col. 7, line 20); and adjusting an access tree structure based on the memory request (e.g., col. 7, lines 1-45); wherein the memory block that satisfied the request is determined based on size with reference to a plurality of linked-lists with associated references to memory blocks of a plurality of sizes (e.g., figs 4-7C, linked lists between 52a to 52c; 52a-52b, and 52b-52e); wherein any references associated with a first linked-list refer memory blocks larger than any memory blocks referred to by any references associated with the second link-list and smaller in size than any memory blocks referred to by any references associated with the third link-list (e.g., fig. 7A, size of 52c is larger than size of 52d or 52e and smaller than size of 52h), and wherein the

adjustment to the access tree structure reflects a result of the determination of the memory block that satisfied the memory request (e.g., figs. 4, 7A-C; col. 7, lines 1-45).

As per claims 25, Sturges teaches a method in a data processing system for allocating memory, the method comprising:

Forming a plurality of linked-lists with associated references to memory blocks (e.g., figs 4-7C, linked lists between 52a to 52c; 52a-52b, and 52b-52e); setting a fast access tree to refer to a first one of the linked –lists (i.e., 52c located on a first level tree, e.g., page 5, lines 25-65; fig. 7A, linked list between 52a to 52c); setting a general access tree to refer to a second one and third one of the linked lists (i.e., 52h, 52d or 52e located on the second level or third level tree; e.g., page 5, lines 25-65; fig. 7A, linked lists between 52b-52d or 52h-52e and 52b-52h); wherein any memory blocks referred to by any references associated with the first linked-list are larger in size than any memory blocks referred to by any references associated with the second link-list and smaller in size than any memory blocks referred to by any references associated with the third link-list (e.g., fig. 7A, size of 52c is larger than size of 52d or 52e and smaller than size of 52h); receiving a memory request for a reference to a memory block (e.g., col. 6, lines 60-65); and accessing at least one of the fast access tree and the general access tree to return the reference to the memory block in response to the memory request (e.g., col. 6, line 60-col. 7, line 20).

As per claims 26 and 30, Sturges shows comprising adjusting a structure of the fast access tree and the general access tree based on the memory request (e.g., figs. 4, 7A-C; col. 7, lines 1-45).

As per claims 27 and 31, Sturges shows searching the fast access tree to satisfy the memory request and, if the memory request is not satisfied, searching the general access tree to satisfied the memory request (i.e., first level access tree before second or third level access tree; e.g., figs. 4 and 7A-C; col. 7, lines 5-20).

As per claims 28 and 32, Sturges show ensuring that fast access tree refers to one of the plurality of linked-lists that is most frequently requested (i.e., searching the first level access tree is most frequently requested; e.g., figs. 4 and 7A-C; col. 7, lines 5-20).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise Tran whose telephone number is (703) 305-9823. The examiner can normally be reached on Monday, Tuesday, and an alternated Thursday, from 8.30 p.m. to 6.00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Kim, can be reached on (703) 305-3821. The fax phone number for TC 2100 is: After-final (703) 746-7238; Official (703) 746-7239; Non Official (703) 746-7240

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



Denise Tran

03/19/04